



Brown & Root Environmental

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C-NAVY-6-97-0190W

June 12, 1997

Project Number 5278

Mr. James X. Shafer
Remedial Project Manager
Northern Division, Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop 82
Lester, Pennsylvania 19113

Reference: CLEAN Contract No. N62472-90-D-1298
Contract Task Order 218

Subject: RAB Meeting Minutes

Dear Mr. Shafer:

Enclosed is a copy of the May 21, 1997 NETC RAB meeting minutes.

If you have any questions about this matter, please contact me at 508-658-7899.

Very truly yours,

Betsy Horne
Community Relations Specialist

BH:ib

Enclosure

c: Dr. D. K. Abbass (w/enc.)
Mr. Alfred Arruda, Jr. (w/enc.)
Ms. Elizabeth Bermender (w/enc.)
Ms. Mary A. Blake (w/enc.)
Dr. David W. Brown (w/enc.)
Mr. Paul M. Cormier (w/enc.)
Mr. Anthony D'Agnenica (w/enc.)
Mr. Francis J. Flanagan (w/enc.)
Mr. Mike Foley (w/enc.)

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c: Mr. Byron J. Hall (w/enc.)
Mr. Dennis F. Klodner (w/enc.)
Mr. Joseph McEnness (w/enc.)
Mr. Thomas McGrath (w/enc.)
Mr. T. R. McGrath, Jr. (w/enc.)
Mr. Howard L. Porter (w/enc.)
Mr. Paul D. Russell (w/enc.)
Mr. Charles Salmond (w/enc.)
Mr. Keith Stokes (w/enc.)
Mr. John Torgan (w/enc.)
Ms. Claudette Weissinger (w/enc.)
Ms. Mary Philcox (w/enc.)
Mr. David Egan (w/enc.)
Mr. Paul Kulpa, DEM (w/enc.)
Ms. Kymberlee Keckler, EPA (w/enc.)
Ms. Sarah White, EPA (w/enc.)
Ms. Jennifer Hayes, Gannett Fleming (w/enc.)
Mr. Tim Prior, USF&WS (w/enc.)
Mr. Ken Finkelstein, NOAA (w/enc.)
Capt. Bogle, NETC (w/enc.)
Mr. James Barden (w/enc.)
Hon. Paul W. Crowley (w/enc.)
Hon. June Gibbs (w/enc.)
Councilman Dennis McCoy (w/enc.)
Mr. Vincent Arnold (w/enc.)
Captain Norman Pattarozzi (w/enc.)
Dr. David Kim (w/enc.)
Sister Annie Marie Walsh (w/enc.)
Brother Joseph (w/enc.)
Newport Public Library (w/enc.)
Ms. Joanne Gorman, Middletown Free Library (w/enc.)
Portsmouth Free Public Library (w/enc.)
Capt. Jon Wyman, NETC (w/enc.)
Mr. David Sanders, NETC (w/enc.)
Mr. Brad Wheeler, NETC (w/enc.)
Mr. R. Boucher, NORTHDIV (w/o enc.)
Mr. Liyang Chu, B&RE, Wilmington (w/enc.)
Mr. John Trepanowski, B&RE, Philadelphia (w/enc.)
Ms. Meg Price, B&RE, Philadelphia (w/o enc.)
File 5278-3.2 w/o enc./9.4 w/enc.

As Community Co-chair of the NETC Restoration Advisory Board (RAB), I am submitting this document on the RAB's behalf.

Presentations were made at the NETC RAB meeting on February 19, 1997 describing the results of two recently released Derecktor Shipyard documents: the Study Area Screening Evaluation (SASE) draft, which examined on-shore contamination, and the Marine Ecological Risk Assessment draft final, which investigated off-shore contamination. The results of these reports prompted the Navy to identify appropriate steps to address the contamination. These steps were outlined to the RAB at the February meeting. Following some discussion, the RAB issued an advisory opinion supporting the cleanup approaches as follows:

On-shore project: Conduct removal actions at three areas. The actions, to be initiated before September 30, 1997, would address contaminated soil around Buildings 6, 42, and 234. After the removal actions are completed, the Navy intends to restore the site to naval use as soon as possible.

Off-shore project: Prepare a feasibility study to address contamination at locations in Coddington Cove impacted by Derecktor on-shore activities. The Navy anticipates beginning work on the feasibility study in mid-October 1997.



Joseph McEnness
RAB Community Co-chair

Date

05.21.97

OVERVIEW OF THE SUPERFUND HUMAN HEALTH RISK ASSESSMENT PROCESS

Presented by:

**Sarah Levinson
U.S. EPA, Region I**

BASIC QUESTIONS ANSWERED WITH RISK INFORMATION

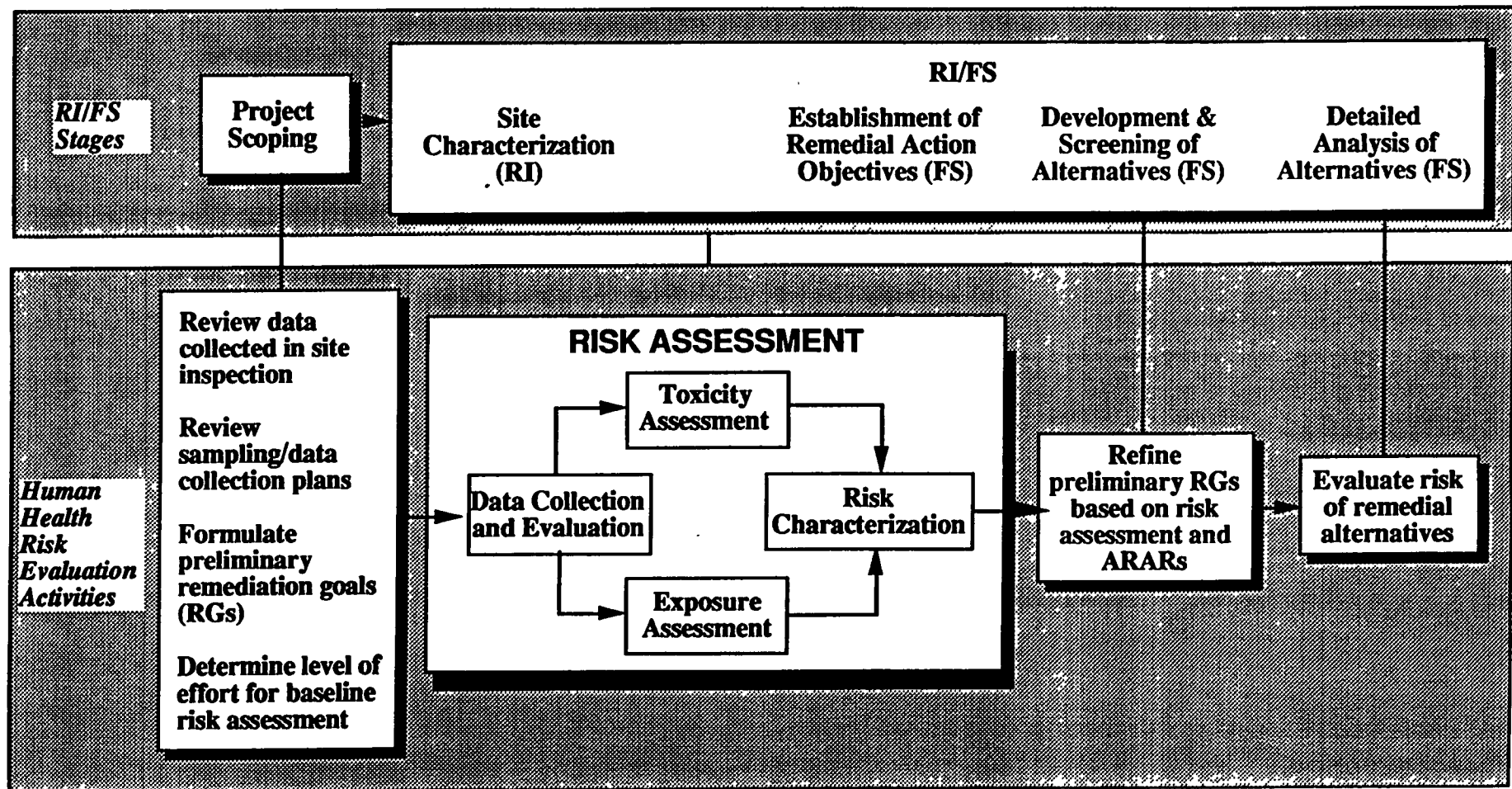


- **How bad is the site?**
- **How bad could it become if nothing is done?**
- **Does the site warrant remedial action?**

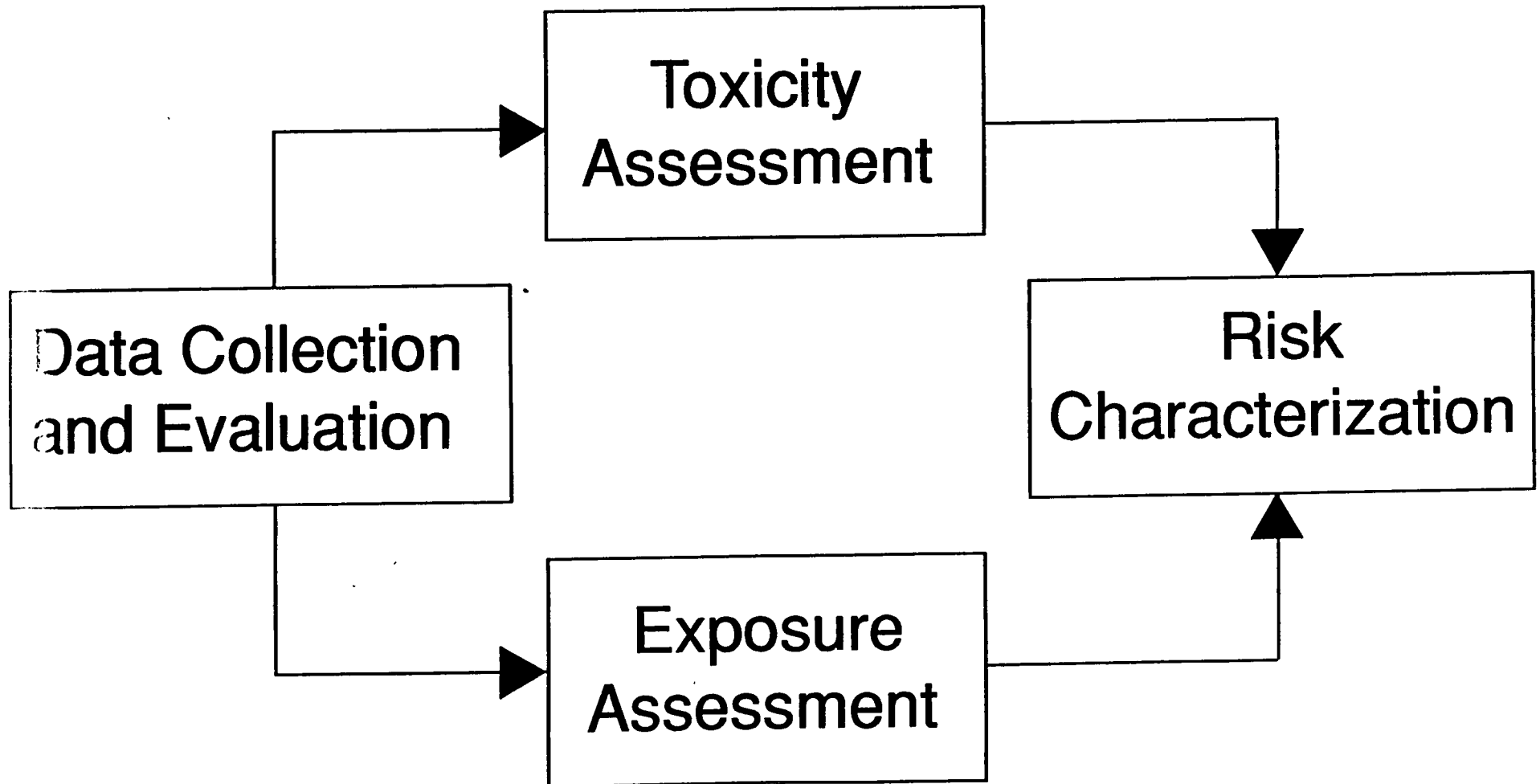


- **How much should be cleaned up for the site to be o.k.?**
- What will be the result of remedial action?**

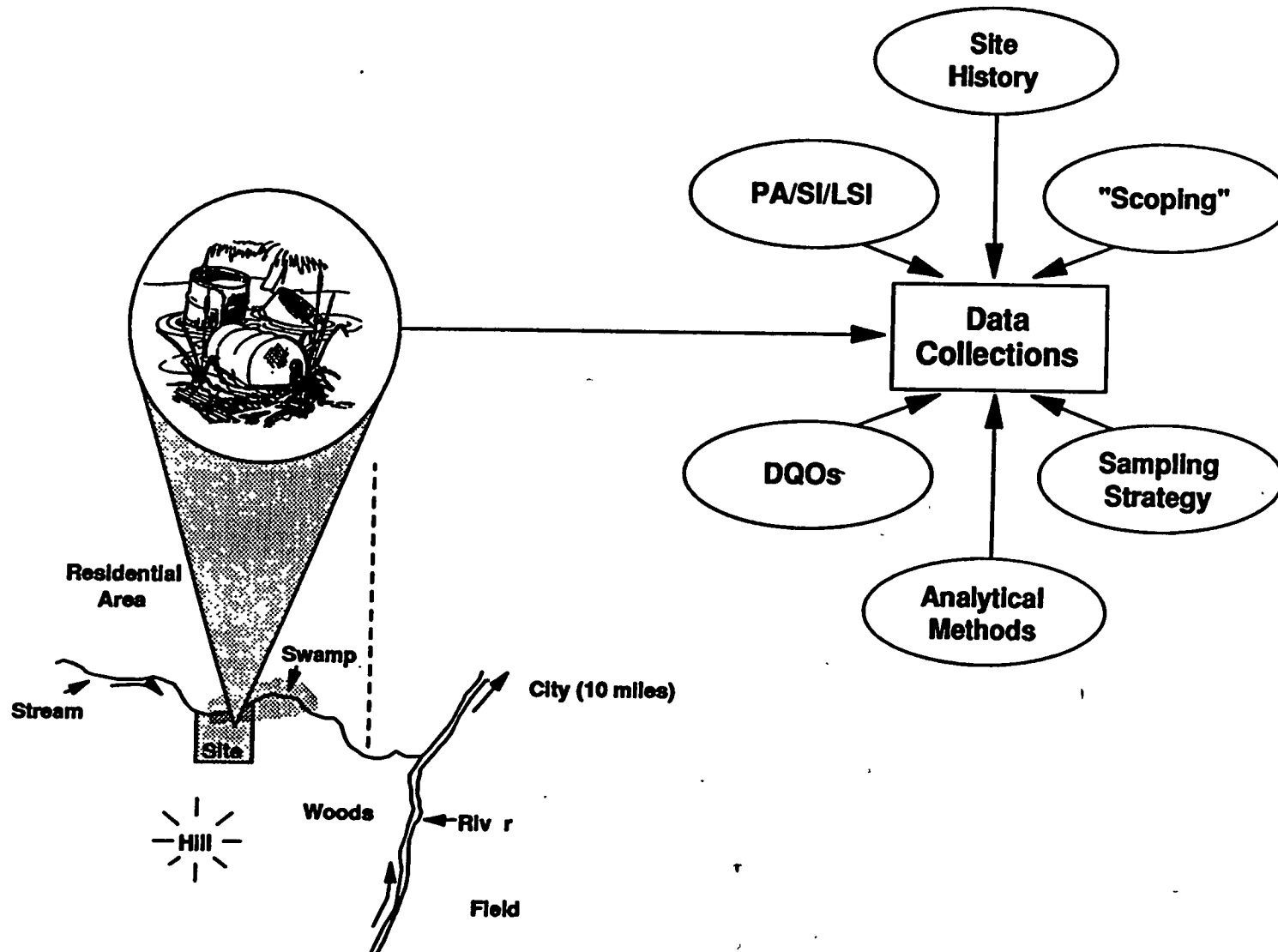
HUMAN HEALTH RISK EVALUATION ACTIVITIES IN THE RI/FS PROCESS



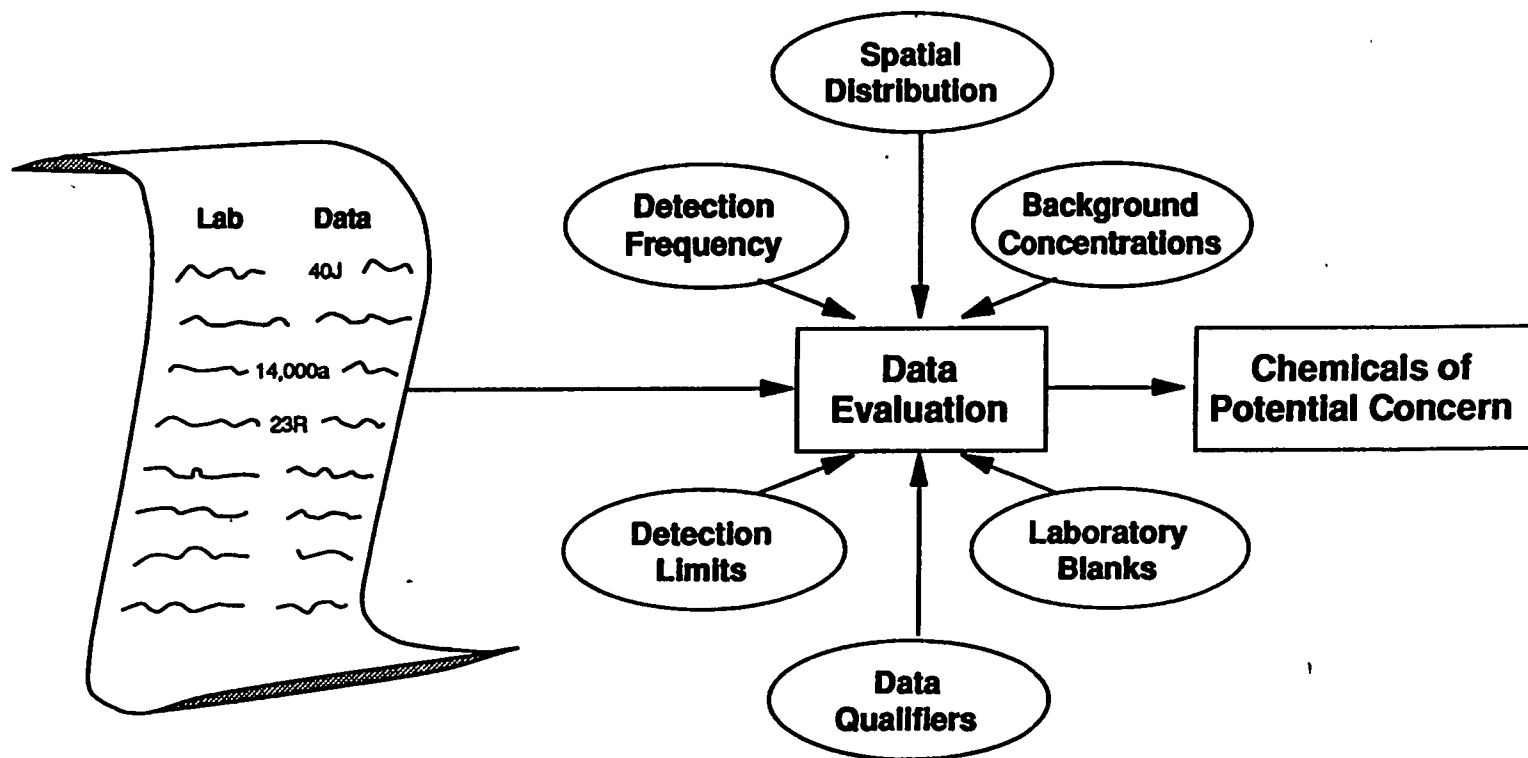
THE FOUR STEPS OF RISK ASSESSMENT



COLLECT DATA



EVALUATE DATA

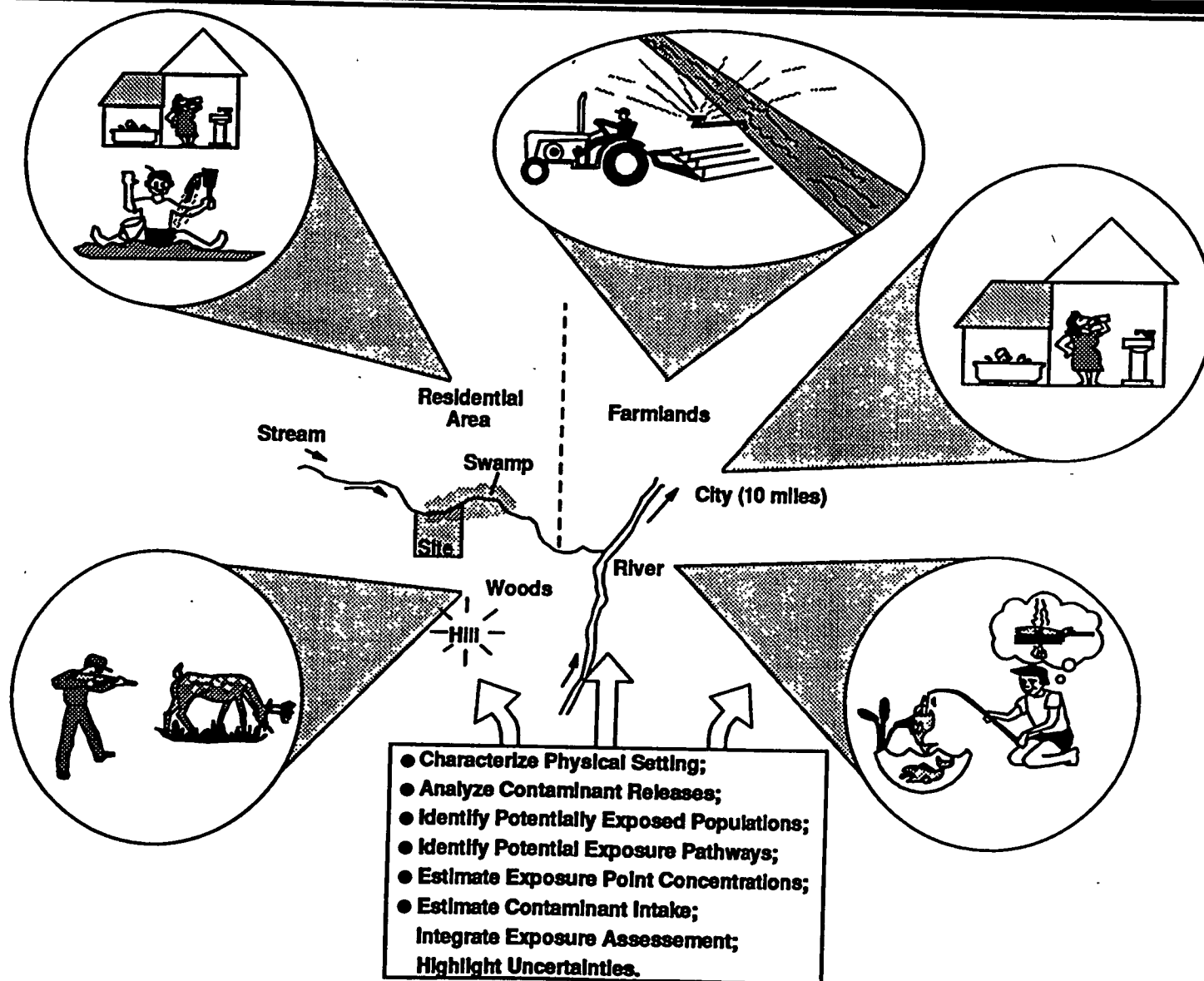


ASSESS TOXICITY

For chemicals of potential concern, what are...

Types of Effects	<ul style="list-style-type: none">• Carcinogenic	<ul style="list-style-type: none">• Developmental• Acute• Subchronic• Chronic (noncarcinogenic)
Qualitative Factors?	<ul style="list-style-type: none">• Animal experiments• Human evidence• Weight of evidence (A,B,C)	<ul style="list-style-type: none">• Animal experiments• Human evidence
Quantitative Factors?	<ul style="list-style-type: none">• Non-threshold effects• Animal to human extrapolation• High to low dose extrapolation	<ul style="list-style-type: none">• Threshold effects• Uncertainty factors• Animal to human extrapolation• High to low dose extrapolation
Toxicity Values?	<ul style="list-style-type: none">• Slope factors• Units = $(\text{mg/kg/day})^{-1}$	<ul style="list-style-type: none">• Reference doses (RfDs)• Units = mg/kg/day

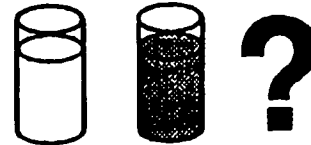
ASSESS EXPOSURE



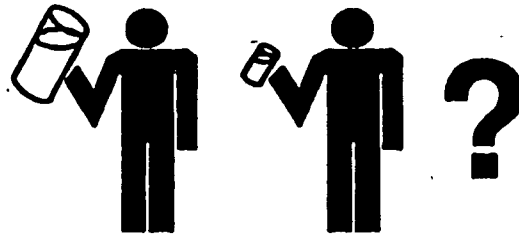
ASSESS EXPOSURE

Five Basic Variables Used to Estimate Intake

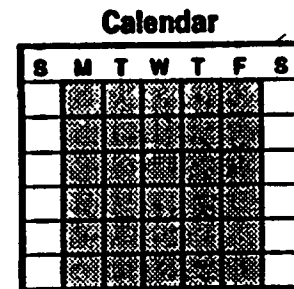
- Exposure Point Concentrations:



- Contact Rate:



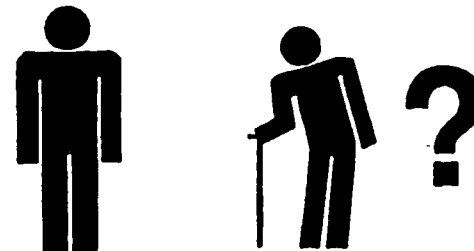
- Exposure Frequency/Duration:



- Body Weight:



Exposure Averaging Time:



RISK CHARACTERIZATION

- ▶ **RISK = \int (Toxicity x Exposure)**
 - ▶ **CARCINOGENS**
 - **Excess Cancer Risk = Slope Factor x Exposure**
 - **Expressed as a Probability: i.e. 1/10,000 or 1×10^{-4}**
 - ▶ **NON-CARCINOGENS**
 - **Hazard Quotient = $\frac{\text{Exposure}}{\text{Reference Dose}}$**
 - **Result is a Ratio, Not a Risk**
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